

**AMENDMENTS TO THE ABSTRACT:**

A revised Abstract is attached to this paper. This sheet replaces the original sheet including the Abstract.

ABSTRACT OF THE DISCLOSURE

Testing AC coupled interconnects using boundary scan test methodology. Specially designed AC boundary scan cells and boundary scan logic are used. These are compatible with IEEE Standard 1149.1 testing. An *AC\_EXTEST* method is used to determine the reliability of the AC coupled interconnections. The method includes preloading the test stimulus, initiating the *AC\_EXTEST* instruction, executing the instruction, transferring the instruction results, and evaluating the results. During the test, the TAP controllers of both the driving and receiving ICs are held in the *Run-Test/Idle* state for the time required to complete execution of the instruction. During this time, the driving IC is applying the AC test stimulus to the interconnections and the receiving IC is sampling the signal. The test may be repeated with different test data and may be run together with a DC *EXTEST* method to determine the reliability of both the AC and the DC coupled interconnections independently.